

REMARKS

The indication of allowable subject matter in claims 1-10 and 14-24, as well as the Examiner's continued detailed and clear Office Actions, is acknowledged and appreciated. For the following reasons, it is respectfully submitted that all claims are in condition for allowance.

Claim 11 stands rejected under 35 U.S.C. § 102(e) as being anticipated by newly cited Sekiguchi et al. '787 ("Sekiguchi"). This rejection is rendered moot by the amendment to claim 11 which makes it dependent on allowed claims 1, 6 or 10. Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claims 1, 6 and 10 are patentable, it is respectfully submitted that all claims dependent thereon are also patentable. In addition, it is respectfully submitted that the dependent claims are patentable based on their own merits by adding novel and non-obvious features to the combination.

Claim 13 stands rejected under 35 U.S.C. § 103 as being unpatentable over Sekiguchi in view of Webb '675 ("Webb"). This rejection is respectfully traversed for the following reasons.

A. Proposed combination does not disclose claimed features

Claim 13 recites in pertinent part, "a material having at least 16 Ni equivalent given by (%Ni + 30 × %C + 0.5 × %Mn) and at least 18 Cr equivalent given by (%Cr + %Mo + 1.5 × %Si + 0.5 × %Nb) is used for said rotary shaft" (emphasis added). The Examiner admits that Sekiguchi does not disclose the claimed material for the rotary shaft. The Examiner therefore relies on col. 2, lines 37-40 of Webb as allegedly disclosing the claimed material and thereby modifies Sekiguchi in an attempt to reach the claimed invention. However, col. 2, lines 37-40 of Webb merely discloses "nickel plated aluminum, monel, tin" That is, Webb suggests only compositions of Ni + Al, Ni + "monel" (monel = trade name for nickel/copper alloy), or Ni + Sn. Webb does not suggest the **combination** of compositional elements defining the claimed material, let alone their relative amounts.

The Examiner is directed to MPEP § 2143.03 under the section entitled "All Claim Limitations Must Be Taught or Suggested", which sets forth the applicable standard:

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. (citing *In re Royka*, 180 USPQ 580 (CCPA 1974)).

In the instant case, the pending rejection does not "establish *prima facie* obviousness of [the] claimed invention" as recited in claim 13 because the proposed combination fails the "all the claim limitations" standard required under § 103.

B. Proposed combination is improper

Moreover, it is respectfully submitted that the proposed combination is based solely on improper hindsight reasoning using only Applicants' specification as the motivation to select bits and pieces of the prior art for reconstructing the claimed invention. The Examiner has attempted to show only that the claimed elements are *individually* known, without establishing *prima facie* obviousness by providing objective evidence from the prior art that the *combination* of elements is known or suggested. The Examiner alleges as motivation for making the combination that the modification to Sekiguchi would make the shaft thereof "resistant to erosion when exposed to the gases." However, Sekiguchi already discloses a corrosion resistant material for the shaft and the Examiner has not provided any evidence that the materials disclosed by Webb would *improve* the corrosion resistance of Sekiguchi. Webb discloses only that the disclosed materials are corrosion resistant generally, and is silent as to being more corrosion resistant than the material disclosed by Sekiguchi. Accordingly, the prior art does not suggest the desirability of modifying Sekiguchi in the manner set forth by the Examiner because there is no objective reasons for doing so.

As is well known in patent law, a *prima facie* showing of obviousness can only be established if the prior art "suggests the desirability" of the proposed combination using objective evidence. The Examiner is directed to MPEP § 2143.01 under the subsection entitled "Fact that References Can Be Combined or Modified is Not Sufficient to Establish *Prima Facie* Obviousness", which sets forth the applicable standard:

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. (*In re Mills*, 16 USPQ2d 1430 (Fed. Cir. 1990)).

In the instant case, even assuming that the cited prior art can be modified, it is submitted that the "mere fact that [Sekiguchi and Webb] can be modified ... does not render the resultant modification obvious" because nowhere does the prior art "suggest the desirability of the modification" as set forth by the Examiner.

The Examiner is further directed to MPEP § 2143.01 under the subsection entitled "Fact that the Claimed Invention is Within the Capabilities of One of Ordinary Skill in the Art is Not Sufficient by Itself to Establish *Prima Facie* Obviousness", which sets forth the applicable standard:

A statement that modifications of the prior art to meet the claimed invention would have been [obvious] because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. (citing *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993)).

In the instant case, even assuming that the cited prior art "teach that all aspects of the claimed invention [are] individually known in the art", it is submitted that such a conclusion "is not sufficient to establish a *prima facie* case of obviousness" because there is no objective reason on the record to modify the teachings of the cited prior art in the manner set forth by the Examiner.

It is respectfully submitted that only Applicants have provided the requisite rationale for providing the claimed combination, which can provide advantages and benefits over the prior art. For example, Applicants have discovered that because in SUS304 the austenitic texture is not stable, undesirable martensitic transformation is likely. Such martensitic transformation results in positive volume change, thereby bending the rotary shaft (see, e.g., page 29, line 12 – page 30, line 19 of Applicants' specification). Accordingly, in order to

suppress such bending, Applicants conceived of using “a material having at least 16 Ni equivalent given by (%Ni + 30 × %C + 0.5 × %Mn) and at least 18 Cr equivalent given by (%Cr + %Mo + 1.5 × %Si + 0.5 × %Nb)” for the austenitic stainless material forming the rotary shaft (*see, e.g.*, page 29, line 28 – page 30, line 2 of Applicants’ specification; the claimed material representing an index of stability of the austenite texture and ferrite texture, respectively).

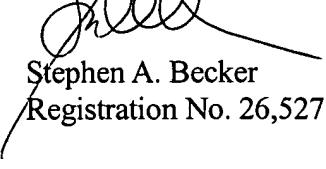
Based on all the foregoing, it is respectfully submitted that claims 11 and 13 are patentable over the cited prior art. Accordingly, it is respectfully requested that the rejections under 35 U.S.C. § 102 and 103 be withdrawn.

CONCLUSION

Having fully and completely responded to the Office Action, Applicants submit that all of the claims are now in condition for allowance, an indication of which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,
MCDERMOTT, WILL & EMERY



Stephen A. Becker
Registration No. 26,527

600 13th Street, N.W.
Washington, DC 20005-3096
(202) 756-8000 SAB:MWE
Facsimile: (202) 756-8087
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